



DATE: Tuesday, December 23, 2003

| Hide? | Set Nam | <u>e Query</u> | Hit Count |
|-------|---------|--------------------------|------------------|
| | DB=US | SPT; PLUR=YES; OP=AD. | J |
| | Ľ5 | L4 and dialysis | 15 |
| | L4 | L2 and trap | 83 |
| | L3 | L2 and reactive carbonyl | 8 |
| | L2 | L1 and carbonyl | 907 |
| | L1 | (514/2,23,183)![CCLS] | 6674 |

END OF SEARCH HISTORY

(FILE 'HOME' ENTERED AT 09:57:18 ON 23 DEC 2003)

FILE 'CAPLUS' ENTERED AT 09:57:46 ON 23 DEC 2003

FILE 'CAPLUS, MEDLINE, USPATFULL, EUROPATFULL' ENTERED AT 09:58:02 ON 23 DEC 2003

| L1 | 1027 | S | REACTIV | VE CARBONYL | |
|----|------|---|---------|--|---|
| L2 | 0 | S | REACTIV | VE CARBONYL TRAP | |
| L3 | 139 | S | L1 AND | TRAP | |
| L4 | | - | | DIALYSIS | |
| L5 | 126 | S | L3 AND | (CHARCOAL OR ?GUANIDINE OR ALBUMIN OR CYSTEINE OR HY | D |
| L6 | 56 | S | L5 AND | FILTER | |
| L7 | 19 | S | L6 AND | DIALY? | |
| | | | | | |

ANSWER 1 OF 19 USPATFULL on STN

2003:312757 USPATFULL ACCESSION NUMBER:

TITLE:

Novel inhibitors of formation of advanced glycation

endproducts (AGEs)

INVENTOR(S):

Rahbar, Samuel, Encino, CA, UNITED STATES Lalezari, Iraj, Scarsdale, NY, UNITED STATES

NUMBER KIND DATE

PATENT INFORMATION: APPLICATION INFO.:

US 2003220362 A1 20031127 US 2003-358403 A1 20030205 (10)

RELATED APPLN. INFO.:

Continuation-in-part of Ser. No. US 2001-800976, filed

on 8 Mar 2001, GRANTED, Pat. No. US 6605642

Continuation-in-part of Ser. No. US 2000-543703, filed

on 5 Apr 2000, GRANTED, Pat. No. US 6337350

NUMBER DATE ______

PRIORITY INFORMATION:

US 1999-127835P 19990405 (60)

DOCUMENT TYPE: FILE SEGMENT:

Utility APPLICATION

LEGAL REPRESENTATIVE:

ROTHWELL, FIGG, ERNST & MANBECK, P.C., 1425 K STREET,

N.W., SUITE 800, WASHINGTON, DC, 20005

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

NUMBER OF DRAWINGS:

19 Drawing Page(s)

LINE COUNT: 980

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The nonenzymatic glycation and crosslinking of proteins is a part of the aging process with the glycation endproducts and crosslinking of long-lived proteins increasing with age. This process is increased at elevated concentrations of reducing sugars in the blood and in the intracellular environment such as occurs with diabetes. The structural and functional integrity of the affected molecules become disturbed by these modifications and can result in severe consequences. The compounds of the present invention can be used to inhibit this process of nonenzymatic glycation and therefore to inhibit some of the ill effects caused by diabetes or by aging. The compounds are also useful for preventing premature aging, spoilage of proteins in food and can prevent discoloration of teeth.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 2 OF 19 USPATFULL on STN

ACCESSION NUMBER:

PATENT ASSIGNEE(S):

2003:308308 USPATFULL

TITLE:

Preventing and reversing advanced glycosylation

endproducts

INVENTOR(S):

Cerami, Anthony, Shelter Island, NY, United States Ulrich, Peter C., Old Tappan, NJ, United States Wagle, Dilip R., Valley Cottage, NY, United States Hwang, San-Bao, Sudbury, MA, United States Vasan, Sara, Yonkers, NY, United States

Egan, John J., New York City, NY, United States Alteon Inc., Ramsey, NJ, United States (U.S.

corporation)

NUMBER KIND DATE US 38330 E1 20031125 US 5656261 19970812 (Original) US 1999-373345 19990812 (9) US 1995-375155 19950118 (Original) PATENT INFORMATION: APPLICATION INFO.: DOCUMENT TYPE: Reissue

FILE SEGMENT:

GRANTED

PRIMARY EXAMINER: ASSISTANT EXAMINER: McKane, Joseph K.

Sackey, Ebenezer

LEGAL REPRESENTATIVE:

Elrifi, Ph.D., Ivor R., Golden, Matthew J., Mintz, Levin, Cohn, Ferris, Glovsky & Popeo, P.C.

NUMBER OF CLAIMS:

EXEMPLARY CLAIM: NUMBER OF DRAWINGS:

0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT:

1970

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB

The present invention relates to compositions and methods for inhibiting and reversing nonenzymatic cross-linking (protein aging). Accordingly, a composition is disclosed which comprises a thiazolium compound capable of inhibiting, and to some extent reversing, the formation of advanced glycosylation endproducts of target proteins by reacting with the carbonyl moiety of the early glycosylation product of such target proteins formed by their initial glycosylation. The method comprises contacting the target protein with the composition. Both industrial and therapeutic applications for the invention are envisioned, as food spoilage and animal protein aging can be treated. A novel immunoassay for detection of the reversal of the nonenzymatic crosslinking is also disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 3 OF 19 USPATFULL on STN

ACCESSION NUMBER:

RELATED APPLN. INFO.:

2003:220192 USPATFULL

NUMBER KIND

TITLE:

INVENTOR(S):

Concentrated, stable fabric softening composition Trinh, Toan, Maineville, OH, UNITED STATES Tordil, Helen Bernardo, West Chester, OH, UNITED STATES Wahl, Errol Hoffman, Cincinnati, OH, UNITED STATES Rinker, Jennifer Lea, Fairfield, OH, UNITED STATES Demeyere, Hugo Jean Marie, Merchtem, BELGIUM Declercq, Marc Johan, Strombeek, BELGIUM Gosselink, Eugene Paul, Cincinnati, OH, UNITED STATES Letton, James Carey, Forest Park, OH, UNITED STATES Back, Deborah Jean, Cleves, OH, UNITED STATES

Severns, John Cort, West Chester, OH, UNITED STATES Sivik, Mark Robert, Fairfield, OH, UNITED STATES Vogel, Alice Marie, Middletown, OH, UNITED STATES

DATE

US 2003153483 A1 US 2001-954772 A1 PATENT INFORMATION: APPLICATION INFO.:

20030814 20010918 (9)

Division of Ser. No. US 1998-983542, filed on 25 Sep 1998, PATENTED Continuation-in-part of Ser. No. US 1996-621019, filed on 22 Mar 1996, ABANDONED Continuation-in-part of Ser. No. US 1996-620627, filed on 22 Mar 1996, ABANDONED Continuation-in-part of Ser. No. US 1996-620767, filed on 22 Mar 1996, ABANDONED Continuation-in-part of Ser. No. US 1996-620513, filed on 22 Mar 1996, ABANDONED Continuation-in-part of Ser. No. US 1996-621285, filed on 22 Mar 1996, ABANDONED Continuation-in-part of Ser. No. US 1996-621299, filed on 22 Mar 1996, ABANDONED Continuation-in-part of Ser. No. US 1996-621298, filed on 22 Mar 1996, ABANDONED Continuation-in-part of Ser. No. US 1996-620626, filed on 22 Mar 1996, ABANDONED Continuation-in-part of Ser. No. US 1996-620625, filed on 22 Mar 1996, ABANDONED Continuation-in-part of Ser. No. US 1996-620772, filed on 22 Mar 1996, ABANDONED Continuation-in-part of Ser. No. US 1996-621281, filed on 22 Mar 1996, ABANDONED Continuation-in-part of Ser. No. US 1996-620514, filed on 22 Mar 1996, ABANDONED Continuation-in-part of Ser. No. US 1996-620958, filed on 22 Mar 1996, ABANDONED

DOCUMENT TYPE: FILE SEGMENT:

Utility APPLICATION

LEGAL REPRESENTATIVE:

THE PROCTER & GAMBLE COMPANY, PATENT DIVISION,

IVORYDALE TECHNICAL CENTER - BOX 474, 5299 SPRING GROVE

AVENUE, CINCINNATI, OH, 45217

NUMBER OF CLAIMS: EXEMPLARY CLAIM: LINE COUNT:

124 10204

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB

Principal solvents, especially mono-ol and diol principal solvents, having a ClogP of from about 0.15 to about 0.64, preferably from about 0.25 to about 0.62, and more preferably from about 0.40 to about 0.60, are disclosed that have the ability to make clear aqueous fabric softener compositions containing relatively high concentrations of fabric softener actives having ester linkages in their long, hydrophobic chains. The fabric softener actives are either unsaturated, or have intermediate length chains (.about.C.sub.12-14) and the said principal solvents are used at levels of less than about 40%. Other solvents may be present. Some of the said principal solvents are novel compounds and/or novel mixtures. Premixes of the fabric softening actives, the principal solvents, and, optionally, other solvents are useful in the preparation of complete formulations by obviating/limiting the need for heating.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 4 OF 19 USPATFULL on STN

ACCESSION NUMBER:

2002:337482 USPATFULL

TITLE:

Method of treating certain indications associated with

hyperglycemia

INVENTOR(S):

Cerami, Anthony, Shelter Island, NY, UNITED STATES Ulrich, Peter C., Old Tappan, NJ, UNITED STATES Wagle, Dilip R., Valley Cottage, NY, UNITED STATES

Hwang, San-Bao, Sudbury, MA, UNITED STATES Vasan, Sara, Yonkers, NY, UNITED STATES

Egan, John J., Mountain Lakes, NJ, UNITED STATES

NUMBER KIND DATE

PATENT INFORMATION: APPLICATION INFO.:

US 2002192842 A1 US 2002-174883 A1

A1 20021219 A1 20020619 (10)

RELATED APPLN. INFO.:

Division of Ser. No. US 1999-470482, filed on 22 Dec 1999, GRANTED, Pat. No. US 6440749 Division of Ser. No. US 1997-971878, filed on 19 Nov 1997, GRANTED, Pat. No. US 6007865 Division of Ser. No. US 1996-588249, filed

on 18 Jan 1996, GRANTED, Pat. No. US 5853703

Continuation-in-part of Ser. No. US 1995-473184, filed on 7 Jun 1995, ABANDONED Continuation-in-part of Ser. No. US 1995-375155, filed on 18 Jan 1995, GRANTED, Pat.

No. US 5656261

DOCUMENT TYPE: FILE SEGMENT:

Utility APPLICATION

LEGAL REPRESENTATIVE:

ALLEN BLOOM, C/O DECHERT, PRINCETON PIKE CORPORATION

CENTER, P.O. BOX 5218, PRINCETON, NJ, 08543-5218

NUMBER OF CLAIMS:

13 1

EXEMPLARY CLAIM: NUMBER OF DRAWINGS:

2 Drawing Page(s)

LINE COUNT:

2061

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to compositions and methods for inhibiting and reversing nonenzymatic cross-linking (protein aging). Accordingly, compositions are disclosed which comprise an agent capable of inhibiting

the formation of advanced glycosylation endproducts of target proteins, and which additionally reverse pre-formed crosslinks in the advanced glycosylation endproducts by cleaving alpha-dicarbonyl-based protein crosslinks present in the advanced glycosylation endproducts. Certain agents useful are thiazolium salts. The method comprises contacting the target protein with the composition. Both industrial and therapeutic applications for the invention are envisioned, as food spoilage and animal protein aging can be treated. A novel immunoassay for detection of the reversal of the nonenzymatic crosslinking is also disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 5 OF 19 USPATFULL on STN

2002:280686 USPATFULL ACCESSION NUMBER:

Method and use of alpha-amino-beta-mercapto-ethane TITLE:

derivatives as dicarbonyl scavengers for treatment of

conditions resulting from protein, lipid, and DNA

Jacobson, Elaine L., Tucson, AZ, UNITED STATES INVENTOR(S): Jacobson, Myron K., Tucson, AZ, UNITED STATES

Wondrak, Georg T., Tucson, AZ, UNITED STATES

Laurean, Daniel Cervantes, Tucson, AZ, UNITED STATES

NUMBER KIND DATE _____

US 2002156134 A1 20021024 US 2002-93974 A1 20020307 (10) PATENT INFORMATION:

APPLICATION INFO.:

Continuation of Ser. No. US 2001-836552, filed on 16 RELATED APPLN. INFO.:

Apr 2001, GRANTED, Pat. No. US 6417235

NUMBER DATE

US 2000-197216P 20000414 (60) PRIORITY INFORMATION:

DOCUMENT TYPE: Utility APPLICATION FILE SEGMENT:

FULBRIGHT & JAWORSKI, LLP, 666 FIFTH AVE, NEW YORK, NY, LEGAL REPRESENTATIVE:

10103-3198

NUMBER OF CLAIMS: EXEMPLARY CLAIM: 1

19 Drawing Page(s) NUMBER OF DRAWINGS:

774 LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Methods of inhibiting damage to proteins, lipids, and DNA by the use of

penicillamines and other .alpha.-amino-.beta.,.beta.-mercapto-

beta.,.beta.-dimethyl-ethane compounds as dicarbonyl scavengers is disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 6 OF 19 USPATFULL on STN

ACCESSION NUMBER: 2002:217094 USPATFULL

Method of treating certain indications associated with TITLE:

hyperglycemia

Cerami, Anthony, Shelter Island, NY, United States INVENTOR(S):

Ulrich, Peter C., Old Tappan, NJ, United States Wagle, Dilip R., Valley Cottage, NY, United States Hwang, San-Bao, Sudbury, MA, United States

Vasan, Sara, Yonkers, NY, United States

Egan, John J., Mountain Lakes, NJ, United States

Alteon. Inc., Ramsey, NJ, United States (U.S. PATENT ASSIGNEE(S):

corporation)

The Picower Institute for Medical Research, Manhasset,

NY, United States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: APPLICATION INFO.:

US 6440749 B1 20020827 US 1999-470482 19991222 (9)

RELATED APPLN. INFO.:

Division of Ser. No. US 1997-971878, filed on 19 Nov 1997, now patented, Pat. No. US 6007865 Division of Ser. No. US 1996-588249, filed on 18 Jan 1996, now patented, Pat. No. US 5853703 Continuation-in-part of Ser. No. US 1995-473184, filed on 7 Jun 1995, now

abandoned Continuation-in-part of Ser. No. US 1995-375155, filed on 18 Jan 1995, now patented, Pat.

No. US 5656261, issued on 12 Aug 1997

DOCUMENT TYPE: FILE SEGMENT:

Utility GRANTED

PRIMARY EXAMINER: ASSISTANT EXAMINER: Higel, Floyd D. Small, Andrea D.

Dechert LEGAL REPRESENTATIVE: NUMBER OF CLAIMS: EXEMPLARY CLAIM: 1

55

NUMBER OF DRAWINGS:

2 Drawing Figure(s); 2 Drawing Page(s)

2256 LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to compositions and methods for inhibiting and reversing nonenzymatic cross-linking (protein aging). Accordingly, compositions are disclosed which comprise an agent capable of inhibiting the formation of advanced glycosylation endproducts of target proteins, and which additionally reverse pre-formed crosslinks in the advanced glycosylation endproducts by cleaving alpha-dicarbonyl-based protein crosslinks present in the advanced glycosylation endproducts. Certain agents useful are thiazolium salts. The method comprises contacting the target protein with the composition. Both industrial and therapeutic applications for the invention are envisioned, as food spoilage and animal protein aging can be treated. A immunoassay for detection of the reversal of the nonenzymatic crosslinking is also disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 7 OF 19 USPATFULL on STN

ACCESSION NUMBER:

INVENTOR(S):

2002:66844 USPATFULL

TITLE:

Method for identifying regulators of protein-advanced

glycation end product (protein-AGE) formation Jacobson, Elaine L., Tucson, AZ, UNITED STATES Jacobson, Myron K., Tucson, AZ, UNITED STATES Wondrak, Georg T., Tucson, AZ, UNITED STATES

NUMBER KIND DATE ______ US 2002037496 A1 20020328 US 2001-836576 A1 20010416 (9)

APPLICATION INFO .:

NUMBER DATE

PRIORITY INFORMATION:

PATENT INFORMATION:

US 2000-197829P 20000414 (60)

DOCUMENT TYPE: FILE SEGMENT:

Utility APPLICATION

LEGAL REPRESENTATIVE:

Fulbright & Jaworski LLP, 666 Fifth Avenue, New York,

NY, 10103

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

11 1

NUMBER OF DRAWINGS:

19 Drawing Page(s)

LINE COUNT: 884

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The invention relates to methods for identifying compounds which affect cellular stress. In particular, the method relates to identifying

compounds which inhibit protein advanced glycation end product formation, where the compounds are carbonyl scavengers which inhibit the formation. The assay involves combing the substance of interest with histone H1 and ADP-ribose, and then measuring fluorescence and protein cross linking. Various inhibitors ofprotein AGE glycation have been identified, using this assay.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 8 OF 19 USPATFULL on STN

ACCESSION NUMBER:

2001:229705 USPATFULL

TITLE:

Method and use of penicillamines and other

alpha-amino-beta, beta-mercapto-beta, beta-dimethylethane derivatives as dicarbonyl scavengers for

treatment of conditions resulting from protein, lipid,

and DNA damage

INVENTOR(S):

Jacobson, Elaine L., Tucson, AZ, United States Jacobson, Myron K., Tucson, AZ, United States Wondrak, Georg T., Tucson, AZ, United States

Laurean, Daniel Cervantes, Tucson, AZ, United States

NUMBER KIND DATE US 2001051658 A1 20011213 US 6417235 B2 20020709 US 2001-836552 A1 20010416 (9) PATENT INFORMATION: APPLICATION INFO.:

NUMBER DATE

PRIORITY INFORMATION:

LEGAL REPRESENTATIVE:

US 2000-197216P 20000414 (60)

DOCUMENT TYPE:

Utility

FILE SEGMENT:

APPLICATION

FULBRIGHT & JAWORSKI, LLP, 666 FIFTH AVE, NEW YORK, NY,

10103-3198

NUMBER OF CLAIMS:

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS:

19 Drawing Page(s)

LINE COUNT:

684

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Methods of inhibiting damage to proteins, lipids, and DNA by the use of penicillamines and other .alpha.-amino-.beta.,.beta.-mercapto-.beta.,.beta.-dimethyl-ethane compounds as dicarbonyl scavengers is disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 9 OF 19 USPATFULL on STN

ACCESSION NUMBER:

PATENT ASSIGNEE(S):

1999:170258 USPATFULL

TITLE:

Reversing the formation of advanced glycosylation

endproducts

INVENTOR(S):

Cerami, Anthony, Shelter Island, NY, United States Ulrich, Peter C., Old Tappan, NJ, United States Wagle, Dilip R., Valley Cottage, NY, United States Hwang, San-Bao, Sudbury, MA, United States

Vasan, Sara, Yonkers, NY, United States

Egan, John J., Mountain Lakes, NJ, United States Alteon Inc., United States (U.S. corporation)

The Picower Institute for Medical Research, United

States (U.S. corporation)

NUMBER KIND DATE PATENT INFORMATION: US 6007865 19991228 APPLICATION INFO.: US 1997-971878 19971119 (8)

Division of Ser. No. US 1996-588249, filed on 18 Jan RELATED APPLN. INFO.:

1996, now patented, Pat. No. US 5853703 which is a continuation of Ser. No. US 1995-473184, filed on 7 Jun 1995, now abandoned which is a continuation of Ser. No. US 1995-375155, filed on 18 Jan 1995, now patented,

Pat. No. US 5656261

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

McKane, Joseph K. PRIMARY EXAMINER: Dechert Price & Rhoads LEGAL REPRESENTATIVE:

45 NUMBER OF CLAIMS: EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 2 Drawing Figure(s); 2 Drawing Page(s)

2190 LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to compositions and methods for inhibiting and reversing nonenzymatic cross-linking (protein aging). Accordingly, compositions are disclosed which comprise an agent capable of inhibiting the formation of advanced glycosylation endproducts of target proteins, and which additionally reverse pre-formed crosslinks in the advanced glycosylation endproducts by cleaving alpha-dicarbonyl-based protein crosslinks present in the advanced glycosylation endproducts. Certain agents useful are thiazolium salts. The method comprises contacting the target protein with the composition. Both industrial and therapeutic applications for the invention are envisioned, as food spoilage and animal protein aging can be treated. A novel immunoassay for detection of the reversal of the nonenzymatic crosslinking is also disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 10 OF 19 USPATFULL on STN

1999:27676 USPATFULL ACCESSION NUMBER:

N-acylaminoalkyl-hydrazinecarboximidamides TITLE:

Ulrich, Peter C., Old Tappan, NJ, United States Wagle, Dilip R., Valley Cottage, NY, United States INVENTOR(S):

Alteon Inc., Ramsey, NJ, United States (U.S. PATENT ASSIGNEE(S):

corporation)

NUMBER KIND DATE US 5877217 19990302 US 1996-771959 19961223 PATENT INFORMATION:

APPLICATION INFO.: 19961223 (8)

> NUMBER DATE _____

PRIORITY INFORMATION: US 1995-9220P 19951226 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: Granted PRIMARY EXAMINER: Fay, Zohreh LEGAL REPRESENTATIVE: Klauber & Jackson

NUMBER OF CLAIMS: EXEMPLARY CLAIM: LINE COUNT: 1054

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to compositions and methods for inhibiting nonenzymatic cross-linking (protein aging) using compounds of the following formula I ##STR1## wherein alk is a straight or branched chain alkylene group containing from 2 to 8 carbon atoms, and R is a lower alkyl group containing from 1 to 6 carbon atoms; and their biologically or pharmaceutically acceptable acid addition salts. Accordingly, a compositions are disclosed which comprises these Nacylaminoalkylhydrazinecarboximidamides, which are capable of inhibiting the formation of advanced glycosylation endproducts of target proteins. The method comprises contacting the target protein with the composition.

Both industrial and therapeutic applications for the invention are envisioned, as food spoilage and animal protein aging can be treated.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 11 OF 19 USPATFULL on STN

ACCESSION NUMBER: 1998:161979 USPATFULL

Preventing and reversing the formation of advanced TITLE:

glycosylation endproducts

Cerami, Anthony, Shelter Island, NY, United States INVENTOR(S):

Ulrich, Peter C., Old Tappan, NJ, United States Wagle, Dilip R., Valley Cottage, NY, United States

Hwang, San-Bao, Sudbury, MA, United States Vasan, Sara, Yonkers, NY, United States

Egan, John J., Mountain Lakes, NJ, United States

The Picower Institute for Medical Research, Manhasset, PATENT ASSIGNEE(S):

NY, United States (U.S. corporation)

Alteon Inc., Ramsey, NJ, United States (U.S.

corporation)

NUMBER KIND DATE

US 5853703 US 1996-588249 19981229 PATENT INFORMATION: 19960118 (8) APPLICATION INFO.:

Continuation-in-part of Ser. No. US 1995-473104, filed RELATED APPLN. INFO.:

on 7 Jun 1995, now abandoned which is a

continuation-in-part of Ser. No. US 1995-375155, filed

on 18 Jan 1995, now patented, Pat. No. US 5656261

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

McKane, Joseph K. PRIMARY EXAMINER: Klauber & Jackson LEGAL REPRESENTATIVE:

86 NUMBER OF CLAIMS:

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 2 Drawing Figure(s); 2 Drawing Page(s)

LINE COUNT: 2478

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to compositions and methods for inhibiting and reversing nonenzymatic cross-linking (protein aging). Accordingly, compositions are disclosed which comprise an agent capable of inhibiting the formation of advanced glycosylation endproducts of target proteins, and which additionally reverse pre-formed crosslinks in the advanced qlycosylation endproducts by cleaving alpha-dicarbonyl-based protein crosslinks present in the advanced glycosylation endproducts. Certain agents useful are thiazolium salts. The method comprises contacting the target protein with the composition. Both industrial and therapeutic applications for the invention are envisioned, as food spoilage and animal protein aging can be treated. A novel immunoassay for detection of the reversal of the nonenzymatic crosslinking is also disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 12 OF 19 USPATFULL on STN L7

97:70708 USPATFULL ACCESSION NUMBER:

Preventing and reversing advanced glycosylation TITLE:

endproducts

Cerami, Anthony, Shelter Island, NY, United States INVENTOR(S):

Ulrich, Peter C., Old Tappan, NJ, United States Wagle, Dilip R., Valley Cottage, NY, United States Hwang, San-Bao, Sudbury, MA, United States Vasan, Sara, Yonkers, NY, United States

Egan, John J., Mountain Lakes, NJ, United States The Picower Institute for Medical Research, Manhasset, PATENT ASSIGNEE(S):

NY, United States (U.S. corporation)

Alteon Inc., Ramsey, NJ, United States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION:

US 5656261 19970812 US 1995-375155 19950118 (8)

APPLICATION INFO.:

US 1995-375155

DOCUMENT TYPE: FILE SEGMENT:

Utility Granted

PRIMARY EXAMINER: LEGAL REPRESENTATIVE: McKane, Joseph Klauber & Jackson

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

57 1

LINE COUNT:

1411

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to compositions and methods for inhibiting AB and reversing nonenzymatic cross-linking (protein aging). Accordingly, a composition is disclosed which comprises a thiazolium compound capable of inhibiting, and to some extent reversing, the formation of advanced glycosylation endproducts of target proteins by reacting with the carbonyl moiety of the early glycosylation product of such target proteins formed by their initial glycosylation. The method comprises contacting the target protein with the composition. Both industrial and therapeutic applications for the invention are envisioned, as food spoilage and animal protein aging can be treated. A novel immunoassay for detection of the reversal of the nonenzymatic crosslinking is also disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 13 OF 19 EUROPATFULL COPYRIGHT 2003 WILA on STN L7

PATENT APPLICATION - PATENTANMELDUNG - DEMANDE DE BREVET

ACCESSION NUMBER:

EUROPATFULL EW 200329 FS OS 1327887

TITLE:

Use of thiazolium compounds for preventing and reversing the formation of advanced glycosylation end products. Verwendung von Thiazoliumverbindungen zum Verhindern und

Umkehren der Bildung von Endprodukten der

fortgeschrittenen Glykosylierung.

Utilisation de composes de thiazolium pour empecher et inverser la formation de produits finis de glycosylation

avancee.

Cerami, Anthony, Ram Island Drive, Shelter Island, NY INVENTOR(S):

11964, US;

Ulrich, Peter C., 148 DeWolf Road, Old Tappan, NJ 07675,

Wagle, Dilip R., Cottage No. 4, 731 Route 9W, Valley

Cottage, NY 10989, US;

Hwang, San-Bao, 38, Carriage Way, Sudbury, MA 01776, US; Vasan, Sara, 1155 Warburton Avenue, Yonkers, NY 10701,

Egan, John J., 63 Ball Road, Mountain Lakes, NJ 07046,

Alteon, Inc., 170 Williams Drive, Ramsey, NJ 07446, US; PATENT ASSIGNEE(S):

THE PICOWER INSTITUTE FOR MEDICAL RESEARCH, 350

Community Drive, Manhasset, NY 11030, US

PATENT ASSIGNEE NO:

3028270; 1673241

AGENT:

Mercer, Christopher Paul et al., Carpmaels & Ransford

43, Bloomsbury Square, London WC1A 2RA, GB

AGENT NUMBER:

46611

OTHER SOURCE:

MEPA2003055 EP 1327887 A2 0037

SOURCE:

Wila-EPZ-2003-H29-T2a

DOCUMENT TYPE:

Patent

LANGUAGE: Anmeldung in Englisch; Veroeffentlichung in Englisch
DESIGNATED STATES: R AT; R BE; R CH; R DE; R DK; R ES; R FR; R GB; R GR; R

IE; R IT; R LI; R LU; R MC; R NL; R PT; R SE

EPA2 EUROPAEISCHE PATENTANMELDUNG

PATENT INFO. PUB. TYPE:

PATENT INFORMATION:

PATENT NO KIND DATE

EP 1327887 A2 20030716

'OFFENLEGUNGS' DATE: 20030716

APPLICATION INFO.: EP 2003-75955 19960118

PRIORITY APPLN. INFO.: US 1995-375155 19950118

US 1996-588249
RELATED DOC. INFO.: EP 808163 DIV

L7 ANSWER 14 OF 19 EUROPATFULL COPYRIGHT 2003 WILA on STN

PATENT APPLICATION - PATENTANMELDUNG - DEMANDE DE BREVET

ACCESSION NUMBER: 1228756 EUROPATFULL EW 200232 FS OS TITLE: AGENTS FOR RELIEVING CARBONYL STRESS.

TITLE: AGENTS FOR RELIEVING CARBONYL STRESS WIRKSTOFFE GEGEN CARBONYL-STRESS.

AGENTS PERMETTANT DE SOULAGER LE STRESS INDUIT PAR LE

19960118

CARBONYLE.

INVENTOR(S): MIYATA, Toshio, 102 Ekuseru Isehara 16-25, Sakuradai

2-chome, Isehara-shi, Kanagawa 259-1132, JP

PATENT ASSIGNEE(S): Kurokawa, Kiyoshi, Ichigayahills 401, 49 Ichigaya-cho,

Sinjuku-ku, Tokyo 162-0061, JP;

Miyata, Toshio, 102 Ekuseru Isehara, 16-25, Sakuradai

2-chome, Isehara-shi, Kanagawa 259-1132, JP

PATENT ASSIGNEE NO: 2738251; 2964891

AGENT: Gruenecker, Kinkeldey, Stockmair & Schwanhaeusser

Anwaltssozietaet, Maximilianstrasse 58, 80538 Muenchen,

DE

AGENT NUMBER: 100721

OTHER SOURCE: BEPA2002066 EP 1228756 A1 0023

SOURCE: Wila-EPZ-2002-H32-T1b

DOCUMENT TYPE: Patent

LANGUAGE: Anmeldung in Japanisch; Veroeffentlichung in Englisch;

Verfahren in Englisch

DESIGNATED STATES: R AT; R BE; R CH; R CY; R DE; R DK; R ES; R FI; R FR; R

GB; R GR; R IE; R IT; R LI; R LU; R MC; R NL; R PT; R

SE; R AL; R LT; R LV; R MK; R RO; R SI

PATENT INFO.PUB.TYPE: EPA1 EUROPAEISCHE PATENTANMELDUNG (Internationale

Anmeldung)

PATENT INFORMATION:

PATENT NO KIND DATE _____ Al 20020807 EP 1228756 'OFFENLEGUNGS' DATE: 20020807 EP 2000-964720 20001006 APPLICATION INFO.: PRIORITY APPLN. INFO.: JP 1999-285735 19991006 WO 00-JP6987 001006 INTAKZ RELATED DOC. INFO.: 010412 INTPNR WO 0124790

L7 ANSWER 15 OF 19 EUROPATFULL COPYRIGHT 2003 WILA on STN

PATENT APPLICATION - PATENTANMELDUNG - DEMANDE DE BREVET

ACCESSION NUMBER: 1213282 EUROPATFULL EW 200224 FS OS

TITLE: Substituted imidazolium salts and their use for the

inhibition of protein ageing.

Substituierte Imidazolium-Saelze und ihre Verwendung zur

Hemmung der Proteinaltern.

Sels d'imidazolium substituees et leur utilisation pour

INVENTOR(S):

l'inhibition de vieillissement des proteins.

Mallon, Veronica M., 395 North Little Tur Road, New

City, NY 10965, US;

Egan, John J., 169 East 69th, Apt. 6D, New York, NY

10021, US;

Hwang, San-Bao, 38 Carriage Way, Sudbury, MA 01176, US; Ulrich, Peter, 148 DeWolf Road, Old Tappan, NJ 07675,

Wagle, Dilip R., 731 Route 9W, Cottage No. 4, Valley

Cottage, NY 10989, US;

Vasan, Sara, 150 East 30th, Apt. 2E, New York, NY 10016,

Cerami, Anthony, 765 Old Saw Mill River Road, Tarryrown,

NY 10591, US

PATENT ASSIGNEE(S):

ALTEON Inc., 170 Williams Drive, Ramsey, New Jersey

07446, US

PATENT ASSIGNEE NO:

1335841

AGENT:

Mercer, Christopher Paul et al., Carpmaels & Ransford

43, Bloomsbury Square, London WC1A 2RA, GB

AGENT NUMBER: 46611

OTHER SOURCE:

BEPA2002050 EP 1213282 A1 0029

SOURCE:

Wila-EPZ-2002-H24-T1a

DOCUMENT TYPE:

Patent

LANGUAGE: DESIGNATED STATES: Anmeldung in Englisch; Veroeffentlichung in Englisch R AT; R BE; R CH; R DE; R DK; R ES; R FI; R FR; R GB; R

GR; R IE; R IT; R LI; R LU; R MC; R NL; R PT; R SE

PATENT INFO. PUB. TYPE: PATENT INFORMATION:

EPA1 EUROPAEISCHE PATENTANMELDUNG

PATENT NO KIND DATE A1 20020612 EP 1213282

'OFFENLEGUNGS' DATE: APPLICATION INFO .:

20020612 EP 2002-75720 19970502 PRIORITY APPLN. INFO.: US 1996-643288 19960508 19970501

US 1997-848776 RELATED DOC. INFO .:

EP 920418 DIV

ANSWER 16 OF 19 EUROPATFULL COPYRIGHT 2003 WILA on STN L7

PATENT APPLICATION - PATENTANMELDUNG - DEMANDE DE BREVET

ACCESSION NUMBER:

1108434 EUROPATFULL EW 200125 FS OS

TITLE:

DRUGS FOR RELIEVING CARBONYL STRESS AND PERITONEAL

DIALYSATES.

MEDIKAMENTE ZUR VERRINGERUNG DER CARBONYLBELASTUNG UND

PERITONEALDIALYSATE.

MEDICAMENTS DE SEDATION DE L'AGRESSION DU CARBONYLE ET

DES DIALYSATS PERITONEAUX.

INVENTOR(S):

MIYATA, Toshio, 102 Ekuseru Isehara 16-25, Sakuradai

2-chome, Isehara-shi, Kanagawa 259-1132, JP

PATENT ASSIGNEE(S):

Kurokawa, Kiyoshi, Ichigaya Hills 401, 49 Ichigaya-yanagimachi, Sinjuku-ku, Tokyo 162-0061, JP;

Miyata, Toshio, 102 Ekuseru Isehara, 16-25, Sakuradai

2-chome, Isehara-shi, Kanagawa 259-1132, JP 2738250; 2964891

PATENT ASSIGNEE NO:

AGENT:

Gruenecker, Kinkeldey, Stockmair & Schwanhaeusser

Anwaltssozietaet, Maximilianstrasse 58, 80538 Muenchen,

DE

AGENT NUMBER:

BEPA2001047 EP 1108434 A1 0051 OTHER SOURCE:

SOURCE:

Wila-EPZ-2001-H25-T1b

DOCUMENT TYPE:

Patent

100721

Anmeldung in Japanisch; Veroeffentlichung in Englisch; LANGUAGE:

Verfahren in Englisch

R AT; R BE; R CH; R CY; R DE; R DK; R ES; R FI; R FR; R DESIGNATED STATES:

GB; R GR; R IE; R IT; R LI; R LU; R MC; R NL; R PT; R

SE; R AL; R LT; R LV; R MK; R RO; R SI

EPA1 EUROPAEISCHE PATENTANMELDUNG (Internationale PATENT INFO. PUB. TYPE:

Anmeldung)

PATENT INFORMATION:

KIND DATE PATENT NO EP 1108434 A1 20010620 'OFFENLEGUNGS' DATE: 20010620 EP 1999-938581 19990823 APPLICATION INFO .: PRIORITY APPLN. INFO.: JP 1998-237108 19980824 JP 1999-155393 19990602 WO 99-JP4521 990823 INTAKZ RELATED DOC. INFO .: WO 0010606 000302 INTPNR

L7 ANSWER 17 OF 19 EUROPATFULL COPYRIGHT 2003 WILA on STN

GRANTED PATENT - ERTEILTES PATENT - BREVET DELIVRE

EUROPATFULL EW 200236 FS PS ACCESSION NUMBER: 920418

SUBSTITUTED IMIDAZOLIUM SALTS AND THEIR USE FOR THE TITLE:

INHIBITION OF PROTEIN AGEING.

SUBSTITUIERTE IMIDAZOLIUNSALZE UND DEREN VERWENDUNG ZUR

HEMMUNG DER PROTEINALTERUNG.

SELS D'IMIDAZOLIUM SUBSTITUES ET LEUR EMPLOI POUR

INHIBER LE VIEILLISSEMENT DE PROTEINES.

WAGLE, Dilip, R., 731 Route 9W, Cottage No. 4, Valley INVENTOR(S):

Cottage, NY 10989, US;

HWANG, San-Bao, 38 Carriage Way, Sudbury, MA 01176, US; MALLON, Veronica, M., 395 North Little Tur Road, New

City, NY 10965, US;

VASAN, Sara, 150 East 30th, Apt. 2E, New York, NY 10016,

EGAN, John J., 169 East 69th, Apt. 6D, New York, NY

10021, US;

ULRICH, Peter, 148, DeWolf Road, Old Tappan, New Jersey

07675, US;

CERAMI, Anthony, 765 Old Saw Mill River Road, Tarrytown,

NY 10591, US

ALTEON Inc., 170 Williams Drive, Ramsey, New Jersey PATENT ASSIGNEE(S):

07446, US

PATENT ASSIGNEE NO: 1335841

Mercer, Christopher Paul, Carpmaels & Ransford 43, AGENT:

Bloomsbury Square, London WC1A 2RA, GB

AGENT NUMBER:

46611 OTHER SOURCE: BEPB2002063 EP 0920418 B1 0016

SOURCE:

Wila-EPS-2002-H36-T1

DOCUMENT TYPE:

Patent

Anmeldung in Englisch; Veroeffentlichung in Englisch LANGUAGE: R AT; R BE; R CH; R DE; R DK; R ES; R FI; R FR; R GB; R DESIGNATED STATES:

GR; R IE; R IT; R LI; R LU; R MC; R NL; R PT; R SE EPB1 EUROPAEISCHE PATENTSCHRIFT (Internationale

Anmeldung)

PATENT INFORMATION:

PATENT INFO. PUB. TYPE:

| FAIENT INFORMATION. | PATENT NO | KIND DATE |
|------------------------|----------------|---------------|
| | EP 920418 | B1 20020904 |
| 'OFFENLEGUNGS' DATE: | | 19990609 |
| APPLICATION INFO.: | EP 1997-922635 | 19970502 |
| PRIORITY APPLN. INFO.: | US 1996-643288 | 19960508 |
| | US 1997-848776 | 19970501 |
| RELATED DOC. INFO.: | WO 97-US7466 | 970502 INTAKZ |
| | WO 9742175 | 971113 INTPNR |

REFERENCE PAT. INFO.: EP 316852 A WO 93-13775 A US 5258381 A US 5356895 A US 5358960 A US 5514676 A

REF. NON-PATENT-LIT.: JOURNAL OF HETEROCYCLIC CHEMISTRY, vol. 11, no. 5,

October 1974, pages 781-6, XP002036880 Y. TAMURA ET. AL.: "Synthesis and properties of 3-acylimino-

1-alkylimidazolium and benzimidazolium betaines."

JOURNAL OF MEDICINAL CHEMISTRY, vol. 32, no. 10, October
1989, WASHINGTON DC, US, pages 2301-6, XP002036881 S.J.

DOMINIANNI ET. AL.: "Oral Hypoglycemic Agents. Discovery

and Structure-Activity Relationships of

Phenacylimidazolium Halides." JOURNAL OF MEDICINAL CHEMISTRY, vol. 30, no. 4, April 1987, WASHINGTON DC,

US, pages 696-704, XP002036882 R. LIS ET. AL.: "Synthesis and Antiarrhythmic Activity of Novel 3-alkyl-1-(omega-(4-((alkylsulfonyl)amino) phenyl)-omega-hydroxyalkyl)-IH-imidazolium Salts and Related

Compounds."

L7 ANSWER 18 OF 19 EUROPATFULL COPYRIGHT 2003 WILA on STN

GRANTED PATENT - ERTEILTES PATENT - BREVET DELIVRE

ACCESSION NUMBER: 888293 EUROPATFULL EW 200213 FS PS TITLE: N-ACYLAMINOALKYLHYDRAZINECARBOXIMIDAMIDES. N-ACYLAMINOALKYLHYDRAZINECARBOXIMIDAMIDE.

N-ACYLAMINOALKYLHYDRAZINECARBOXIMIDAMIDE. N-ACYLAMINOALKYLHYDRAZINECARBOXIMIDAMIDES.

INVENTOR(S): ULRICH, Peter, C., 148 DeWolf Road, Old Tappan, NJ

07675, US;

WAGLE, Dilip, R., 731 Route 9W Cottage No. 4, Valley

Cottage, NY 10989, US

PATENT ASSIGNEE(S): ALTEON Inc., 170 Williams Drive, Ramsey, New Jersey

07446, US

PATENT ASSIGNEE NO: 1335841

AGENT: Mercer, Christopher Paul, Carpmaels & Ransford 43,

Bloomsbury Square, London WC1A 2RA, GB

AGENT NUMBER: 46611

OTHER SOURCE: BEPB2002024 EP 0888293 B1 0017

SOURCE: Wila-EPS-2002-H13-T1

DOCUMENT TYPE: Patent

LANGUAGE: Anmeldung in Englisch; Veroeffentlichung in Englisch
DESIGNATED STATES: R AT; R BE; R CH; R DE; R DK; R ES; R FI; R FR; R GB; R
GR; R IE; R IT; R LI; R LU; R MC; R NL; R PT; R SE; R

AL; R LT; R LV; R RO; R SI

PATENT INFO.PUB.TYPE: EPB1 EUROPAEISCHE PATENTSCHRIFT (Internationale

Anmeldung)

PATENT INFORMATION:

| PAIENI INFORMATION. | | | | |
|------------------------|-----------|-------------|-------|-----------|
| | PATENT NO | | KIND | DATE |
| | EP | 888293 | B1 | 20020327 |
| 'OFFENLEGUNGS' DATE: | | | | 19990107 |
| APPLICATION INFO.: | ΕP | 1996-945113 | | 19961226 |
| PRIORITY APPLN. INFO.: | US | 1995-9220 | | 19951226 |
| | US | 1996-618407 | | 19960319 |
| | US | 1996-771959 | | 19961223 |
| RELATED DOC. INFO.: | WO | 96-US20810 | 96122 | 26 INTAKZ |
| | WO | 9723447 | 97070 | 3 INTPNR |

REFERENCE PAT. INFO.: US 4758583 A

REF. NON-PATENT-LIT.: EUR. J. MED. CHEM. (1987), 22(6), 553-8 CODEN:

EJMCA5; ISSN: 0223-5234, 1987, XP000579748 NAKASHIMA, KUNIO ET AL: "Methylglyoxal bis(guanylhydrazone) analogs. Multifunctional inhibitors for polyamine enzymes" J. ORG. CHEM. (1993), 58(16), 4331-8 CODEN: JOCEAH; ISSN: 0022-3263, 1993, XP000670003 WAGENAAR,

FRANK L. ET AL: "Methodology for the preparation of N-guanidino-modified arginines and related derivatives"

ANSWER 19 OF 19 EUROPATFULL COPYRIGHT 2003 WILA on STN L7

GRANTED PATENT - ERTEILTES PATENT - BREVET DELIVRE

ACCESSION NUMBER:

808163

EUROPATFULL EW 200330 FS PS

TITLE:

USE OF THIAZOLIUM COMPOUNDS FOR PREVENTING AND REVERSING THE FORMATION OF ADVANCED GLYCOSYLATION ENDPRODUCTS. VERWENDUNG VON THIAZOLIUMVERBINDUNGEN ZUM VERHINDERN UND

UMKEHREN DER BILDUNG VON ENDPRODUKTEN DER

FORTGESCHRITTENEN GLYKOSYLIERUNG.

UTILISATION DE COMPOSES DE THIAZOLIUM POUR EMPECHER ET INVERSER LA FORMATION DE PRODUITS FINIS DE GLYCOSYLATION AVANCEE.

INVENTOR(S):

CERAMI, Anthony, Ram Island Drive, Shelter Island, NY

11964, US;

ULRICH, Peter C., 148 DeWolf Road, Old Tappan, NJ 07675,

WAGLE, Dilip R., Cottage No. 4, 731 Route 9W, Valley

Cottage, NY 10989, US;

HWANG, San-Bao, 38 Carriage Way, Sudbury, MA 01776, US; VASAN, Sara, 1155 Warburton Avenue, Yonkers, NY 10701,

EGAN, John J., 63 Ball Road, Mountain Lakes, NJ 07046,

PATENT ASSIGNEE(S):

ALTEON Inc., 170 Williams Drive, Ramsey, New Jersey

07446, US;

THE PICOWER INSTITUTE FOR MEDICAL RESEARCH, 350

Community Drive, Manhasset, NY 11030, US

PATENT ASSIGNEE NO:

1335841; 1673241

Wila-EPS-2003-H30-T1

AGENT:

Mercer, Christopher Paul, Carpmaels & Ransford 43,

Bloomsbury Square, London WC1A 2RA, GB

AGENT NUMBER: 46611

OTHER SOURCE:

MEPB2003040 EP 0808163 B1 0051

SOURCE:

DOCUMENT TYPE:

Patent

LANGUAGE: DESIGNATED STATES: Anmeldung in Englisch; Veroeffentlichung in Englisch R AT; R BE; R CH; R DE; R DK; R ES; R FR; R GB; R GR; R

IE; R IT; R LI; R LU; R MC; R NL; R PT; R SE

PATENT INFO. PUB. TYPE:

EPB1 EUROPAEISCHE PATENTSCHRIFT (Internationale

Anmeldung)

PATENT INFORMATION:

| | PAT | ENT NO | | KIND | TAD | E |
|------------------------|-----|-----------|-----|-------|------|----------|
| | EP | 808163 | | B1 | | 30723 |
| 'OFFENLEGUNGS' DATE: | | | | | 199 | 971126 |
| APPLICATION INFO .: | EΡ | 1996-9035 | 540 | | 199 | 960118 |
| PRIORITY APPLN. INFO.: | US | 1995-3753 | L55 | | 199 | 50118 |
| | US | 1996-5882 | 249 | | 199 | 960118 |
| RELATED DOC. INFO.: | WO | 96-US663 | | 96011 | .8 I | NTAKZ |
| | WO | 96022095 | | 96072 | .5 I | NTPNR |
| REFERENCE PAT. INFO.: | ĒΡ | 167139 | A | | ΕP | 170037 |
| | EΡ | 364344 | A | | ΕP | 586806 |
| | EΡ | 614886 | A | | WO | 94-11490 |
| | WO | 94-20083 | A | | DE | 2323465 |
| | US | 5262152 | A | | | |

REF. NON-PATENT-LIT.:

ADVANCES IN PHARMACOLOGY, vol. 23, 1992, pages 1-34, XP000575711 BUCALA, R. ET AL: "Advanced glycosylation: chemistry, biology and implications for diabetes and aging" cited in the application MODERN AGING RESEARCH, vol. 7, 1985, pages 83-92, XP000575428 ULRICH, P. ET AL: "Aging of proteins. The furoyl furanyl imidazole

crosslink as a key advanced glycosylation event" PROC. NATL. ACAD. SCI., USA, vol. 81, no. 9, May 1984, pages 2684-2688, XP000574890 PONGOR, S. ET AL: "Aging of proteins: isolation and identification of a fluorescent chromophore from the reaction of polypeptides with glucose" MAILLARD REACTIONS IN CHEMISTRY FOOD AND HEALTH, vol. 151, 1994, pages 281-285, XP000576211 KAWAKISHI, S. ET AL: "Biomimic oxidation of glycated protein and Amadori Product" DATABASE WPI Section Ch, Week 8928 Derwent Publications Ltd., London, GB; Class BO2, AN 89-204102 XP002007906 & JP-A-01143855 (MITSUI PHARM INC), 6 June 1989 JOURNAL OF ORGANIC CHEMISTRY, vol. 41, no. 2, 1976, pages 187-191, XP000574967 POTTS, K.T. ET AL: "Bridgehead nitrogen systems. X. Cycloadditions with thiazolium N-ylides" cited in the application TETRAHEDRON, vol. 48, no. 22, 1992, pages 4545-50, XP000575888 SINGH, H. ET AL: "Aqueous base induced selective transformations of 3-(2-oxoalkyl)thiazolium cations" HETEROCYCLES, vol. 31, no. 10, 1990, page 1801-9 XP000576241 GANDASEGUI, M.T. ET AL: "Synthesis of new disubstituted azolium ylides" THE JOURNAL OF MEDICINAL CHEMISTRY, vol. 32, no. 10, 1989, pages 2301-2306, XP000575890 DOMINIANNI, S.J. ET AL: "Oral hypoglycemic agent6s. Discovery and structure-activity relationships of phenacylimidazolium halides" CHEMISTRY LETTERS, vol. 5, 1982, pages 711-714, XP000575895 TSUGE, O. ET AL: "Formation of novel cage compounds via endo-(3 + 2) cycloadducts between thiazolium N-methylides and methylenecyclopropenes" THE JOURNAL OF MEDICINAL CHEMISTRY, vol. 22, no. 3, 1979, pages 306-309, XP000575892 ARCHER, S. ET AL: "An attempt to apply lethal synthesis to the design of chemotherapeutic agents fluorinated 5-beta-(hydroxyethyl)-4-methylthiazoles" DATABASE WPI Section Ch, Week 8544 Derwent Publications Ltd., London, GB; Class B05, AN 85-272759 XP002007907 & JP-A-60184038 (NIPPON KASEI KK), 19 September 1985 Chem. Pharm. Bull., vol.32, pp.2446-2449, (1984) J. Org. Chem., vol.42, pp.1648-1649, (1977) Heterocyclic Chem., vol.10, pp.947-951, (1973) J. Med. Chem., vol. 32, pp. 2301-2306, 1989

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